

DEPARTMENT of ENVIRONMENTAL SERVICES
Water Supply & Pollution Control Division - Biology Bureau

LAKE TROPHIC DATA

MORPHOMETRIC:

Lake: MARSHALL POND	Lake Area (ha): 5.26
Town: UNITY	Maximum depth (m): 3.9
County: Sullivan	Mean depth (m): 2.1
River Basin: Connecticut	Volume (m ³): 109500
Latitude: 43°18'59" N	Relative depth: 1.5
Longitude: 72°16'17" W	Shore configuration: 1.72
Elevation (ft): 1630	Areal water load (m/yr): 4.04
Shore length (m): 1400	Flushing rate (yr ⁻¹): 1.90
Watershed area (ha): 44.0	P retention coeff.: 0.69
% watershed ponded: 0.0	Lake type: natural w/dam

BIOLOGICAL:

24 January 1995

31 August 1994

DOM. PHYTOPLANKTON (% TOTAL)	#1	DINOBRYON 45%	CHRYOSOPHAERELLA 25%
	#2	TABELLARIA 40%	PERIDINIUM 20%
	#3		STAUSTRUM 15%
PHYTOPLANKTON ABUNDANCE (units/mL)			
CHLOROPHYLL-A (µg/L)			3.98
DOM. ZOOPLANKTON (% TOTAL)	#1	KERATELLA 42%	KERATELLA 50%
	#2	ASPLANCHNA 29%	NAUPLIUS LARVA 19%
	#3		POLYARTHRA 17%
ROTIFERS/LITER		153	145
MICROCRUSTACEA/LITER		<1	47
ZOOPLANKTON ABUNDANCE (#/L)		172	197
VASCULAR PLANT ABUNDANCE			Common
SECCHI DISK TRANSPARENCY (m)			3.9 Visible on bottom
BOTTOM DISSOLVED OXYGEN (mg/L)		10.6	8.6
BACTERIA (E. coli, #/100 ml)	#1		
	#2		
	#3		

SUMMER THERMAL STRATIFICATION:

not stratified

Depth of thermocline (m): None
Hypolimnion volume (m³) : None
Anoxic volume (m³) : None

CHEMICAL:

Lake: MARSHALL POND

Town: UNITY

	24 January 1995		31 August 1994		
DEPTH (m)	1.0	3.0	1.0		3.0
pH (units)	5.6	5.6	6.1		5.9
A.N.C. (Alkalinity)	0.8	0.8	1.0		0.7
NITRATE NITROGEN	0.08	< 0.10	< 0.05		< 0.05
TOTAL KJELDAHL NITROGEN	< 0.10	< 0.10	0.14		0.43
TOTAL PHOSPHORUS	0.012	0.008	0.016		0.036
CONDUCTIVITY (μ mhos/cm)	17.3	22.1	20.1		20.1
APPARENT COLOR (cpu)	8	11	15		16
MAGNESIUM			0.54		
CALCIUM			1.1		
SODIUM			0.6		
POTASSIUM			0.29		
CHLORIDE	< 2	< 2	< 2		< 2
SULFATE	4	7	4		5
TN : TP			9		12
CALCITE SATURATION INDEX			5.2		

All results in mg/L unless indicated otherwise

TROPHIC CLASSIFICATION: 1994

D.O. S.D. PLANT CHL TOTAL CLASS

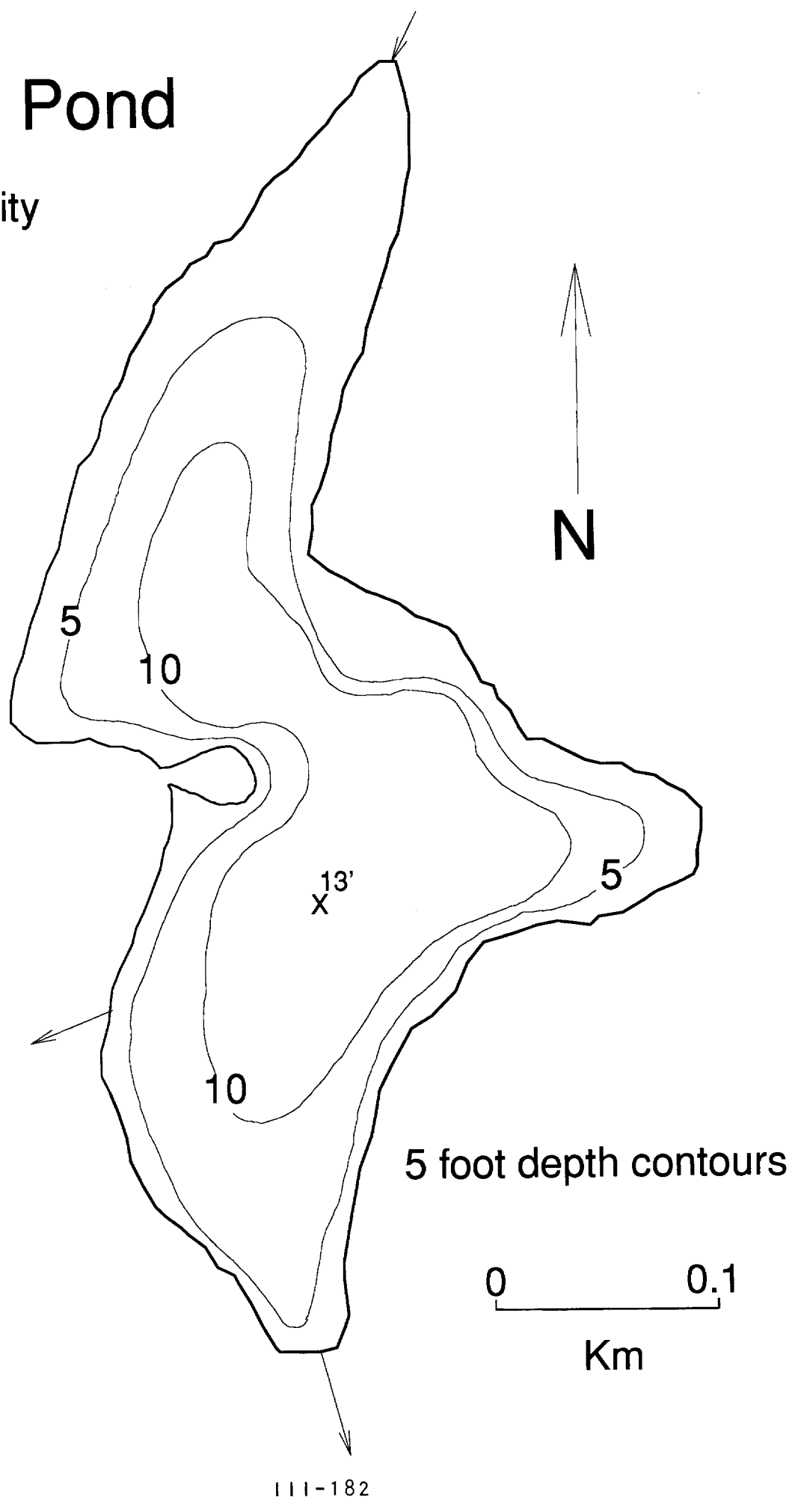
**	1	3	0	4	Oligo.
----	---	---	---	---	--------

COMMENTS:

1. This is a former water supply to the county farm. It is remote and was sampled jointly with the NH Fish and Game Department.
2. It is a small, shallow, somewhat acid pond with clear water, low conductivity and poor buffering capacity (low ANC).
3. The water level was about 1 to 1 1/2 feet below the high water mark at the time of the summer sampling.

Marshall Pond

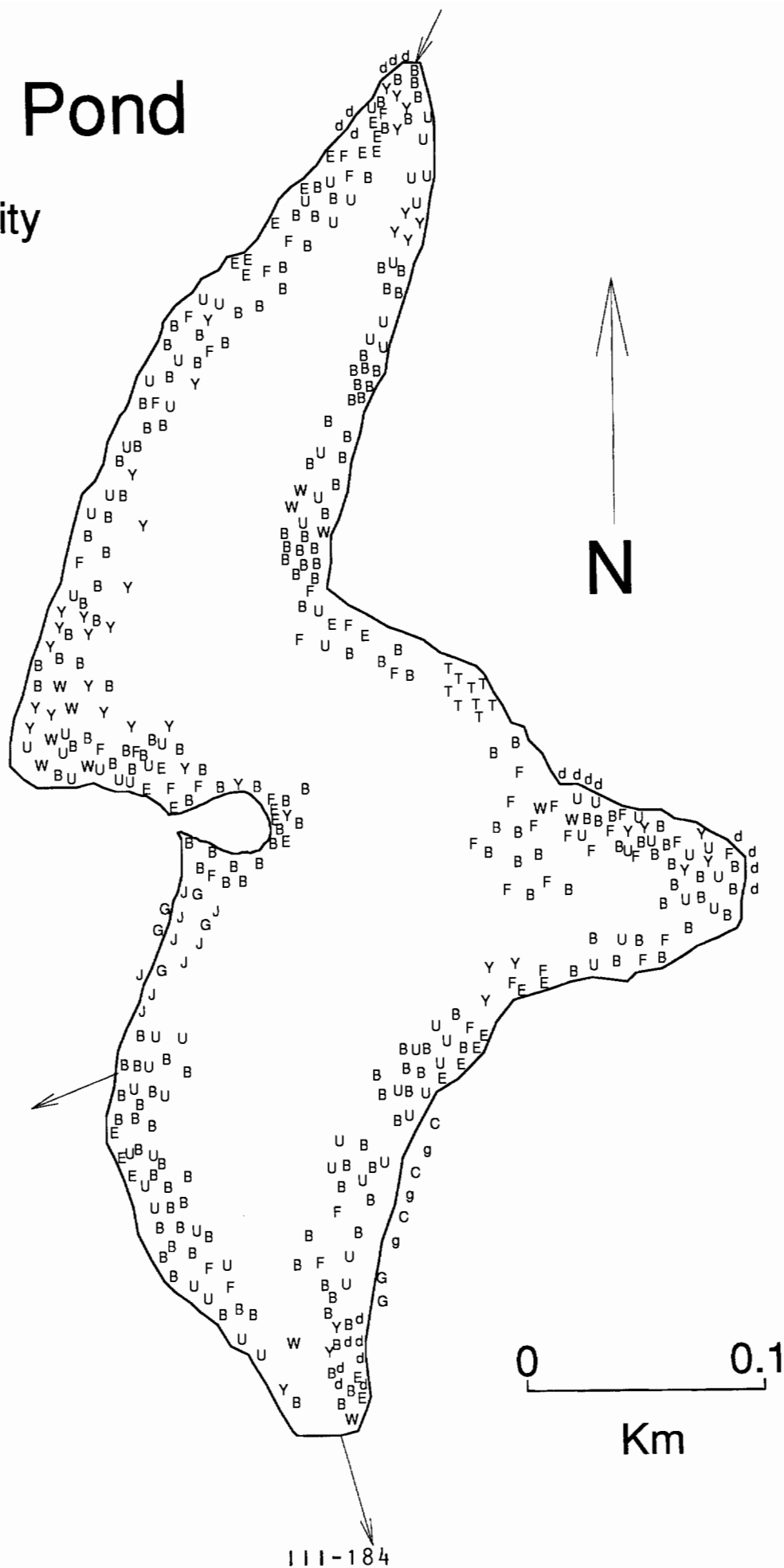
Unity



[illegible]

Marshall Pond

Unity



[illegible]